

IARPA

BROAD AGENCY ANNOUNCEMENT

IARPA-BAA-16-10



Multimodal Objective Sensing to Assess Individuals with Context  
(MOSAIC)

IARPA-BAA-16-10

**Release Date: 26 September 2016**

# IARPA

## BROAD AGENCY ANNOUNCEMENT: IARPA-BAA-16-10

### MOSAIC

#### TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
GENERAL INFORMATION .....	5
SECTION 1: FUNDING OPPORTUNITY DESCRIPTION .....	6
1.A. Program Overview .....	6
1.A.1 Overview .....	6
1.A.2 Program Summary .....	7
1.A.3 Out of Scope .....	9
1.B. Program Milestones, Metrics, and Waypoints .....	9
1.B.1 Research Areas.....	10
1.B.2. MOSAIC T&E Evaluation.....	12
1.B.3. Milestones & Metrics.....	13
1.B.4. Waypoints .....	15
1.B.5 Human Subjects Protections .....	16
1.B.6 Data Protection Plan .....	16
1.C. Program Timeline and Deliverables .....	16
1.D. Meeting and Travel Requirements .....	19
1.D.1 Workshops .....	19
1.D.2. Site Visits .....	19
1.E. Place of Performance .....	19
1.F. Period of Performance .....	19
SECTION 2: AWARD INFORMATION .....	20
SECTION 3: ELIGIBILITY INFORMATION .....	20
3.A. Eligible Applicants.....	20
3.A.1. Organizational Conflicts of Interest (OCI) .....	21
3.A.2 Multiple Submissions to the BAA .....	22
3.B. U.S. Academic Organizations.....	22
3.C. Other Eligibility Criteria .....	22
3.C.1. Collaboration Efforts .....	22

SECTION 4: PROPOSAL AND SUBMISSION INFORMATION .....	23
4.A. Proposal Information .....	23
4.B. Proposal Format and Content.....	23
4.B.1. Volume 1, Technical and Management Proposal {Limit of 35 pages} .....	24
4.B.2. Volume 2: Cost Proposal {No Page Limit} .....	32
4.C. Submission Details.....	35
4.C.1. Due Dates.....	35
4.C.2. Proposal Delivery.....	35
4.D. Funding Restrictions .....	36
SECTION 5: PROPOSAL REVIEW INFORMATION.....	36
5.A. Technical and Programmatic Evaluation Criteria.....	36
5.A.1. Overall Scientific and Technical Merit.....	36
5.A.2. Effectiveness of Proposed Work Plan.....	36
5.A.3. Contribution and Relevance to the IARPA Mission and Program Goal .....	37
5.A.4. Relevant Experience and Expertise .....	37
5.A.5. Resource Realism.....	37
5.B. Method of Evaluation and Selection Process.....	38
5.C. Negotiation and Contract Award .....	38
5.D. Proposal Retention .....	38
SECTION 6: AWARD ADMINISTRATION INFORMATION.....	38
6.A. Award Notices .....	39
6.B. Administrative and National Policy Requirements.....	39
6.B.1. Proprietary Data .....	39
6.B.2. Intellectual Property.....	39
6.B.3. Human Use.....	41
6.B.4. Animal Use.....	41
6.B.5. Publication Approval .....	41
6.B.6. Export Control .....	42
6.B.7. Subcontracting .....	42
6.B.8. Reporting.....	43
6.B.9. System for Award Management (SAM).....	43
6.B.10. Representations and Certifications .....	43
6.B.11. Lawful Use and Privacy Protection Measures .....	43
6.B.12. Public Access To Results.....	44

6.B.13. Cloud Compatibility.....	44
APPENDIX A.....	46
APPENDIX B .....	48
APPENDIX C .....	50
APPENDIX D.....	52
APPENDIX E .....	54
APPENDIX F.....	57
APPENDIX G .....	59
APPENDIX H.....	61

## GENERAL INFORMATION

This publication constitutes a Broad Agency Announcement (BAA) and sets forth research of interest in the area of multimodal sensing for personnel assessment. Awards based on responses to this BAA are considered to be the result of full and open competition.

- **Federal Agency Name** – Intelligence Advanced Research Projects Activity (IARPA)
- **Funding Opportunity Title** – Multimodal Objective Sensing to Assess Individuals with Context (MOSAIC)
- **Announcement Type** – Initial
- **Funding Opportunity Number** – IARPA-BAA-16-10
- **Catalog of Federal Domestic Assistance Numbers (CFDA)** – Not applicable
- **Dates**
  - Posting Date: **Monday, September 26, 2016**
  - Proposal Due Date for Initial Round of Selections: **5:00 pm Eastern Time Thursday, November 10, 2016**
  - BAA Closing Date: **Thursday, February 10, 2017**
- **Anticipated individual awards** – Multiple awards anticipated
- **Types of instruments that may be awarded** – Procurement contracts, grants, cooperative agreements and other transactions
- **Agency Points of contact**  
ATTN: IARPA-BAA-16-10  
Office of the Director of National Intelligence  
Intelligence Advanced Research Projects Activity  
Washington, DC 20511  
Electronic mail: [dni-iarpa-BAA-16-10@iarpa.gov](mailto:dni-iarpa-BAA-16-10@iarpa.gov)
- **Program Manager** – Dr. Alexis Jeannotte
- **Program website** – <http://www.iarpa.gov/index.php/research-programs/mosaic>
- **BAA Summary** – The MOSAIC program seeks innovative approaches to unobtrusive, passive, and persistent measurement to predict an individual's job performance.
- **Questions** – Submit questions on administrative, technical, or contractual issues by email to [dni-iarpa-BAA-16-10@iarpa.gov](mailto:dni-iarpa-BAA-16-10@iarpa.gov). All requests must include the full name and affiliation of a point of contact. Do not send questions with proprietary content. A consolidated Question and Answer response will be posted on the Federal Business Opportunities website (<http://www.fbo.gov>) and linked from the IARPA website (<http://www.iarpa.gov/index.php/research-programs/mosaic/questions.html>). No answers will go directly to the submitter. IARPA will accept questions until **Friday, October 21, 2016**.

## **SECTION 1: FUNDING OPPORTUNITY DESCRIPTION**

The Intelligence Advanced Research Projects Activity (IARPA) often selects its research efforts through the Broad Agency Announcement (BAA) process. The use of a BAA solicitation allows a wide range of innovative ideas and concepts. The BAA will appear first on the FedBizOpps website, <http://www.fedbizopps.gov>, and then the IARPA website at <http://www.iarpa.gov>. The following information is for those wishing to respond to this Program BAA.

This BAA (IARPA-BAA-16-10) is for the MOSAIC program. IARPA is seeking innovative solutions for the MOSAIC program in this BAA. The goal of the MOSAIC program is to improve the Intelligence Community's capabilities to evaluate its workforce throughout their careers. The program aims to advance multimodal sensing to measure personnel and their environment unobtrusively, passively, and persistently both at work and outside of work, reduce the time and manpower required to process and integrate such data, and construct personalized and adaptive assessments of an individual that are accurate throughout the individual's career. The MOSAIC program is envisioned to begin in May 2017 and end by November 2020.

### **1.A. Program Overview**

#### **1.A.1 Overview**

The Intelligence Community (IC) needs to ensure its workforce is well-suited for the psychological and cognitive demands that are present across a variety of its missions. Capabilities that enhance the accuracy of individual evaluations will help maintain optimal job performance throughout an individual's career and proactively identify changes in an individual that may impact their work. Such capabilities are particularly relevant as the pace and complexity of the challenges facing the IC workforce continue to increase, putting even greater burdens on individuals and organizations to keep pace and adapt.

Current tools to evaluate the workforce, such as interviews, cognitive assessments, and questionnaires, while often highly predictive of job performance, may only provide a snapshot of an individual in a controlled testing environment. As such, they may not capture more dynamic or context-dependent aspects of an individual. Traditional tools may suffer other limitations, such as lengthy administration times or susceptibility to measurement artifacts (e.g., practice effects, impression management, test anxiety).

To address such limitations, the MOSAIC program seeks to fund rigorous, high-quality research to develop and validate unobtrusive, passive, and persistent sensor-based methods to assess stable and dynamic psychological, cognitive, and physiological aspects of an individual. The research will take advantage of advancements in sensors, data collection architectures, feature extraction methods, data fusion techniques, as well as the modeling and analysis of rich spatiotemporal data generated from the collection of an individual's daily actions and responses. Performers will employ a variety of sensors (mobile, worn, and carried sensors, social media applications, etc.) to measure individuals and the environment around them (e.g., time, light, temperature, sound, interpersonal interactions) to develop personalized and contextualized assessments of an individual over time.

The MOSAIC program is envisioned as a 42-month effort that is intended to begin in May 2017. Phase 1 of the program will consist of a Base Period of eleven (11) months and one (1) Option Period of ten (10) months. Phase 2 of the program will consist of two (2) Option Periods, one of eleven (11) months and one of ten (10) months. Responses to this BAA must address both phases, which includes the Base Period and three (3) Option Periods.

### 1.A.2 Program Summary

Performers in the MOSAIC program will develop and validate sensor-based methods for evaluating individual difference variables that strongly correlate with job performance, as well as new tools to estimate dimensions of job performance. The program will focus on a variety of sensors, broadly defined as anything that can collect data from a consenting study participant throughout that participant's daily life, to include time at work and outside of work. The research will focus on solutions that generalize across job types, with a broad interest in jobs that involve individual and collaborative work, occurring in fast-paced, information-rich environments.

Performers will aim to test and validate whether data collected via sensor-based methods can provide accurate estimates of individual job performance. For MOSAIC, job performance is defined as the total value of job-relevant activities that an individual carries out over a given period.<sup>1</sup> Core dimensions of job performance are:<sup>2</sup>

- *Task performance*: activities or behaviors that are formally recognized as part of the job;<sup>3</sup>
- *Organizational citizenship behaviors*: discretionary behaviors that promotes effective functioning of the organization;<sup>4</sup> and,
- *Counterproductive work-behaviors*: voluntary behaviors that can threaten the well-being of an organization and/or its members.<sup>5</sup>

MOSAIC performers will also test and validate whether sensor-based methods provide accurate estimates of scores on assessments of “individual difference variables” that correlate with job performance and which may be stable or fluctuating throughout the data collection period. The program will focus on the following individual difference variables, which will expand from Phase 1 to Phase 2:

#### Phase 1

- Intelligence

#### Phase 2

- All Phase 1 variables

---

<sup>1</sup> Motowidlo, S. J., & Kell, H. J. (2013). Job performance. In Weiner, I. B. (Ed.) *Handbook of psychology*, 2<sup>nd</sup> Edition, John Wiley & Sons, Inc.

<sup>2</sup> Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, 8(4), 216-226; Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology*, 87, 66-80.

<sup>3</sup> Borman, W. C., & Motowidlo, S. M. (1993). Expanding the criterion domain to include elements of contextual performance. *Personnel Selection in Organizations*; San Francisco: Jossey-Bass, 71.; Hunter, J. E. (1983). *Test Validation for 12,000 Jobs: An Application of Job Classification and Validity Generalization Analysis to the General Aptitude Test Battery (GATB)* (Test Research Report No. 45). Washington, DC: United States Employment Service, United States Department of Labor.

<sup>4</sup> Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of applied psychology*, 68(4), 653.; Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human performance*, 10(2), 85-97.

<sup>5</sup> Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of management journal*, 38(2), 555-572.

- Executive functions
- Personality factors
- Affect
- Anxiety
- Health and well-being
- Cognitive style
- Personality facets
- Adaptability<sup>6</sup>
- Burnout

Performers will be expected to develop sensor-based methods capable of accurately estimating individual scores on all job performance dimensions and individual difference variables across the two phases. The collection of traditional assessments used as ground truth for the individual difference variables and job performance dimensions will be identical across all performers and will be provided by the Government. It is expected that the Government will provide these at program kickoff. Assessments will be administered at a range of frequencies, from a single occasion up to daily repeated measures. The minimum frequency of administration will also be defined by the Government. Offerors may choose to measure additional variables, which should be explained and justified in their proposals. After receiving the collection of ground truth assessments at program kickoff, performers may propose to use additional assessments of the variables or dimensions listed above or give assessments at an increased frequency.

Notional examples of “ground truth” traditional assessments to measure individual difference variables could include, but are not limited to: Raven’s advanced progressive matrices (intelligence), Category switch task (executive function), NEO Personality Inventory-Revised (personality factors and facets), Positive and Negative Affect Schedule (affect), State-Trait Anxiety Inventory (state and trait anxiety), fitness, sleep, alcohol consumption questionnaires (health and well-being), Need for Cognition (cognitive style), situational judgment task for the ability to handle crisis situations (adaptability), and the Maslach Burnout Inventory-General Scale (burnout).<sup>7</sup> The goal for performers will be to predict an individual’s results on these assessments, using only sensor-based approaches.

To meet the goals of the MOSAIC program, offerors will describe how they will advance sensing, data processing and modeling, with careful validation using ground truth assessments.

- **Sensing** - Offerors will propose a theoretically motivated set of sensors that unobtrusively, passively, and persistently measure participants and their environment, as well as protocols to collect data from the proposed set of sensors.
- **Processing and Modeling** - Offerors will propose the development of automated methods to process the multimodal sensor data, as well as the development of modeling methods that use sensor-based data to provide accurate estimates of stable and dynamic individual difference variables and job performance dimensions.

<sup>6</sup> Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85, 612-624.

<sup>7</sup> [www.pearsonclinical.com](http://www.pearsonclinical.com); Mayr, U., & Kliegl, R. (2000). Task-set switching and long-term memory retrieval. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 26(5), 1124-1140.; [www4.parinc.com](http://www4.parinc.com); Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.; Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.; Cacioppo, J.T. & Petty, R.E (1982). The need for cognition. *Journal of Personality and Social Psychology*, 42(1), 116-131.; Schaufeli, W. B., & Leiter, M. P. (1996). Maslach burnout inventory-general survey. *The Maslach burnout inventory-test manual*, 3, 22-26.



- **Validation** – Offerors will propose how they will validate their set of sensors, processing, and modeling techniques using data collected from their own participant populations. Performers will use the Government-defined collection of ground truth assessments of stable and dynamic individual difference variables and dimensions of job performance to generate scores for each participant on each assessment. It is expected that performers will use these scores to demonstrate the value of sensor-based data and the performance of their processing and modeling approaches.

The Government will work with an independent test and evaluation (T&E) team to develop the collection of ground truth assessments and replicate each performer’s methodology. The T&E replication effort will recruit an independent cohort of 200 or more subjects per performer method, administer sensors in line with performer protocols, and administer the collection of ground truth assessments for all the individual difference variables and job performance dimensions described in Section 1.A.2. The T&E replication effort will indicate how accurately the performers’ sensor-based approaches: (1) estimate stable and dynamic individual difference variables; (2) detect significant changes in individual difference variables; and, (3) estimate dimensions of job performance.

### **1.A.3 Out of Scope**

The MOSAIC program is not investing in research or development in the following areas:

- Development or refinement of new sensors; offerors may leverage such developments where feasible, but funding will not be specifically provided for such efforts;
- Development or improvements in size, weight, or power components of sensors or devices, advancement of radio technology or other transmission protocols, or the development or advancement of novel materials;
- The use of invasive sensors, including, but not limited to those that can be ingested, injected, implanted, or that limit a participant’s ability to conduct normal activities;
- Development of medical or clinical mental health diagnostic tools;
- Development of new conventional “paper-and-pencil” based tests;
- Biometric authentication or identification;
- Use of “black-box” processing pipelines or algorithms - solutions must provide access to the pre-processed data and non-proprietary source code to facilitate independent replication of the data processing and modeling;
- Predictors and dimensions of a specific job or narrow skill set (e.g., doctor, geospatial analyst, professor);
- Solutions that pose a real or perceived health, safety, privacy, and/or ethics concern; and,
- Proposals that focus on reducing the cost of a given technology or commercializing a technology.

### **1.B. Program Milestones, Metrics, and Waypoints**

The Government will use the Program Milestones and Metrics listed below to evaluate the effectiveness of proposed solutions in achieving the stated program objectives, and to determine whether satisfactory progress is being made to warrant continued funding of the project and/or program. The metrics and constraints are intended to bind the scope of effort, while affording

maximum flexibility, creativity, and innovation in proposing solutions to the stated problem. The offeror may also propose additional milestones and metrics as needed. Additional program milestones should be included to provide evidence that the technical and programmatic risks associated with the proposed approach are being addressed. Any such milestones and metrics must be clear and well-defined, with a logical connection to enabling offeror decisions and/or Government decisions.

In order to increase the likelihood that the milestones will be met, several Progress Waypoints are also outlined below. The intent of these waypoints is to provide a measure of progress toward meeting the Program Milestones so that the Government can provide more effective program management.

### **1.B.1 Research Areas**

Proposals must address the three research areas described below. For each area, offerors should clearly define technical, programmatic, and schedule risks associated with their proposed approach, along with plausible risk mitigation strategies.

#### ***1.B.1.a Sensing***

Performers will develop and implement methods to collect data from participants using unobtrusive, passive, and persistent multimodal sensors. In their proposal, offerors will:

- provide theoretical and empirical support for the proposed selection of sensors, clearly stating how they will be used to estimate stable and dynamic individual difference variables and job performance dimensions described in Section 1.A.2;
- propose a protocol to collect data using the proposed sensors;
- describe how participant recruitment, enrollment, consent, engagement, compensation, and attrition will be managed;
- provide a detailed power analysis to justify the proposed number of participants, which must account for attrition (expected to be at least 25%);<sup>8</sup> and
- provide other details, as necessary.

Research in the MOSAIC program will focus on sensing both the individual study participant, and the context, or environment, around the participant. Sensors will be expected to meet the following requirements:<sup>9</sup>

- Sensors that are mobile should be relatively durable (e.g., function during normal temperature ranges, ability to handle moderate shock, vibration, and some minimal water exposure).
- Sensors may include, but must be functional without, continuous GPS, Wi-Fi, Bluetooth, or other signals for constant spatial or temporal referencing and communication.

---

<sup>8</sup> There are no restrictions on the number of participants a performer must test in their own subject cohort, but the power analysis must be clear and based on existing literature.

<sup>9</sup> Offerors may propose a sensor that does not currently meet these requirements if they are able to demonstrate how the sensor would meet program requirements by Phase 2 of the program.

- Sensors must be procurable by, or provided to, the T&E team on the order of at least 200 units.
- Data must be able to be collected by an application deployed on a common hub device (e.g., mobile phone), restricted to the iOS or Android operating systems.

Offerors should provide a justification for how, by the end of the program, a proposed sensor suite would be usable for at least 12 continuous hours without recharging. This justification may include a projection of technological advancements that will happen in parallel with the MOSAIC program, as well as technical challenges the offeror will address as part of their research.

Offerors will also need to propose a plan for the overall architecture to collect, move, and store the data they will collect. This should include a data protection plan for data in transit and at rest, to ensure participant privacy is maintained (see Section 1.B.6 for more details). Offerors should detail what resources they plan to use, to include hardware and software platforms and tools, as well as computing infrastructure, and a rough order of magnitude for computing power needs per participant.

#### ***1.B.1.b Processing and Modeling***

The goals of this technical theme are twofold. First, performers will develop methods to automate the processing of raw sensor data, a critical challenge given the high volume and variety of data. The goal is to move from labor- and time-intensive methods to automated methods that minimize misclassification. Second, performers will develop and validate approaches for modeling the sensor-based data. These results will determine if sensor-based methods can provide accurate estimates of individual difference variables and dimensions of job performance, and, if so, if they provide additional or unique information relative to the set of ground truth assessments.

Offerors should propose and justify processing and modeling approaches that align with their proposed selection of sensors and data collection protocols. Offerors should describe how they will address the following technical challenges:

- Significantly reduce or eliminate the need for hand correction, manual alignment, or post hoc modifications of the collected data to create fully automated processing solutions;
- Develop adaptive models of each individual being measured over varying lengths of time, incorporating contextual features of the social and physical environment;
- Detect significant variations in stable and dynamic individual difference variables and job performance dimensions;
- Maintain information about contributions of each sensor and data provenance; and
- Yield solutions that are useful and understood by non-experts following a limited training period.

Several individual difference variables and dimensions of job performance are expected to be dynamic and display intra-individual temporal variation throughout the data collection (e.g. affect, anxiety, health variables, citizenship behaviors); therefore, performers will need to

develop modeling approaches that can be used for both frequently and infrequently measured variables. Furthermore, since the development of individualized assessments is a key focus of the MOSAIC program, offerors should discuss how they plan to handle individual differences in baseline characteristics, individual variability in daily behavior and physiology, missing data that may vary by individual and by different sensors, or other possible sources of noise or variability.

In order to facilitate independent testing and verification by the MOSAIC T&E team, proposed solutions must greatly limit or completely eliminate human input in processing the data. If a solution still does require an individual to perform some part of the processing beyond simply implementing a script or series of commands, it is expected that performers will have tested the reliability of such human-based methods through multiple users, which will be documented in detailed reporting of those methods and their reliability across those users.

### ***1.B.1.c      Validation***

Throughout each phase performers will develop, refine, and validate methods for processing and modeling sensor-based data using ground truth assessments of individual difference variables and dimensions of job performance collected from their own participant cohorts. These assessments will measure the variables and dimensions listed in Section 1.A.2 and it is expected that the Government will provide these assessments to performers at program kickoff. Each performer, however, will be responsible for administering these assessments to their own participants and will need to plan the testing schedule and costs, accordingly.

In their proposal, offerors will describe:

- How they will validate the impact and utility of each of their proposed sensors throughout each phase;
- How they will validate and refine processing and modeling methods throughout each phase using data collected in their own participant populations;
- Any active responses required of study participants beyond completion of the ground truth assessments. While the goal of the program is to achieve solutions that are completely passive, the research may require some active responses (e.g. participants providing labels on their own data, recorded response to a probe stimulus); and,
- When and how additional assessments will be administered to participants (e.g., intake, end of protocol, intervals throughout), if an offeror chooses to measure additional variables, dimensions, and/or administer additional assessments.

### **1.B.2.      MOSAIC T&E Evaluation**

In parallel with the performer's work, the MOSAIC T&E team will implement an independent replication of each performer's protocol in each phase. The T&E team will use the same set of ground truth assessments that the Government provides to performers; however, the T&E team will conduct the replication at their own testing locations and using an independent participant sample. To meet the goals of the program, the T&E team will limit the length of each

performer's protocol replication to 8 full weeks of data collection and will recruit and enroll healthy and employed<sup>10</sup> individuals.

At the end of each phase, each performer will be provided with data from the T&E team's replication effort. This dataset will **only** include data collected from the individual performer's sensor-based methods and **not** scores on the ground truth assessments. Each performer will run their data processing and modeling methods and algorithms on the provided data set to estimate scores for each participant on each assessment and submit these scores back to the T&E team. The T&E team will then compare each performer's estimated scores to each participant's real scores on the ground truth assessments to evaluate performers against the metrics described in Section 1.B.3.

One month prior to the formal T&E evaluations, performers will submit to the MOSAIC T&E team all documented processing and modeling software and algorithms (source and executable code and associated documentation), along with the pre- and post-processed data sets collected by the performers. The T&E team will use these submissions to perform an independent verification of each performer's methods and results. In addition to ensuring that all necessary verification materials are clear and complete, each performer will be required to be available for questions and troubleshooting from the T&E team.

### 1.B.3. Milestones & Metrics

Each phase, performers will be expected to demonstrate progress against the milestones and metrics in Table 1.

**Table 1: MOSAIC Milestones (M) and Metrics**

			Phase 1			Phase 2		
			M1	M2	M3	M4	M5	M6
Description	Metric		Month 5	Month 10	Month 17	Month 24	Month 31	Month 38
Completed IRB Review	Pass / Fail (P/F)		P/F			P/F		
Full Sensor & Protocol Demo	Pass / Fail (P/F)			P/F			P/F	
Time to Process Data	Hours				≤ 24			≤ 1
Convergent Validity with Individual Difference Variables	Correlation (r)	Internal Research Results (IRR)		0.25		.55	.6	
		T&E Evaluation			.5			.7
	Goodness-of-fit (within-person r <sup>2</sup> )	IRR		.1		.3	.4	
		T&E Evaluation			.25			.5
Criterion Validity of Job Performance Dimensions	Goodness-of-fit (r <sup>2</sup> )	IRR		.05		.15	.2	
		T&E Evaluation			.1			.25
	Incremental validity (incremental R <sup>2</sup> )	IRR		.025		.065	.085	
		T&E Evaluation			.05			.1

<sup>10</sup> Due to the program's focus on job performance.

**Milestones 1 & 4 – Completed IRB Review:** Performers will obtain and deliver all necessary approvals from their organization’s Institutional Review Board (IRB).

**Milestones 2 & 5 – Full Sensor & Protocol Demo:** Performers will demonstrate their methods and sensor suite to the MOSAIC Government team<sup>11</sup> during an on-site evaluation that will be used to determine successful accomplishment of technical and programmatic goals and will be used to inform decisions regarding continuation of funding and option exercise. Concurrently, performers will provide an interim report detailing all methods, results, and progress to date.

**Milestones 2, 4 & 5 –Internal Research Results:** Using data collected from their internal studies, performers will deliver results on each of the convergent and criterion validity technical metrics and at the milestones defined in Table 1. The results will be delivered throughout each phase and progress in meeting the defined targets will be used to evaluate performer’s progress towards achieving the metrics set for Milestones 3 and 6. Results will be delivered with all source and executable code and any necessary guides required to verify and re-run performer processing and modeling algorithms. The results will be used to determine successful accomplishment of technical goals and may be used to inform decisions regarding continuation of funding and option exercise.

All individual difference variables added in Phase 2 (see Section 1.A.2) will be included in the results of self-assessments delivered at Milestone 5, but do not need to be included in the results delivered at Milestone 4.

**Milestones 3 & 6 – T&E Evaluation:** Performers and the T&E team will complete the MOSAIC T&E evaluations. Each technical solution will be evaluated on the primary metrics defined in Table 1 and described below. All individual difference variables added in Phase 2 (see Section 1.A.2) will be evaluated according to the Phase 2 targets.

***Time to Process Data:*** This metric will be used to evaluate the time it takes the T&E team to process and complete a full analysis of the sensor-based data using each performer’s semi- or fully-automated processing methods. The T&E team will use the processing solutions submitted by each performer prior to the evaluation period to process data collected using each team’s replicated protocol. All processing methods must be documented, verified and checked by teams, and provided to the T&E team, as no formal training sessions for the T&E team by performers will be permitted. The T&E team must be able to easily implement the proposed processing; however, it is expected that performers will be available for troubleshooting and other support, as needed.

***Convergent Validity:*** Convergent validity is the degree to which sensor-derived scores for an individual difference variable of interest (e.g., anxiety) converge (correlate) with the ground truth assessment scores for the same variable. During the evaluation period each performer will be provided with the sensor data collected from the T&E team and will be asked to produce an estimated score for each participant on each of the individual difference variables noted in Section 1.A.2 (personality, adaptability, affect, etc.). These scores will be submitted

---

<sup>11</sup> The Government team will consist of the MOSAIC Program Manager, T&E researchers, and other program advisors and stakeholders.

to the MOSAIC T&E team who will aggregate the scores across each performer's participants to assess:

- The convergence (level and significance of correlation) of the estimated score with the corresponding ground truth measure(s) of the individual difference variables using the correlation coefficient ( $r$ ).
- Within-individual variation on ground truth measures of individual difference variables that are assessed at multiple points in time ( $r^2$ ). Performer sensor-based methods (e.g., a sensor-based measure of anxiety) should show patterns of temporal change or fluctuation that mirror those of the corresponding ground truth-measures (e.g., a self-report measure of anxiety), even after controlling for pure temporal trend.

***Criterion and Incremental Validity:*** Criterion validity is the degree to which an individual difference variable (e.g., anxiety) correlates with or accounts for inter-individual variation in a criterion variable. For the MOSAIC program the criterion variables are synonymous with the dimensions of job performance (e.g., counterproductive work behavior). Criterion validity will be evaluated similar to convergent validity where each performer will be provided with the sensor data collected from the T&E team and will be asked to produce an estimated score for each participant on each dimension of job performance noted in Section 1.A.2 (e.g. counterproductive work behavior). These scores will be submitted to the MOSAIC T&E team who will aggregate the scores across each performer's participants to assess:

- The amount and significance of variance in the criterion variables, as determined by ground truth measure(s) of job performance, that are accounted for by sensor-based methods ( $r^2$ ).
- Incremental validity, which refers to the additional information gained (incremental  $R^2$ , e.g., variation accounted for) by using performer sensor-based methods after controlling for traditional ground truth measures of individual difference variables. This metric will indicate the marginal predictive information gained by using sensor-based methods, beyond that provided by the ground truth assessments of individual difference variables.

Please note that supplementary metrics may be incorporated, but will be considered “ungraded” metrics.

#### **1.B.4. Waypoints**

Each phase, performers will be expected to demonstrate progress against a series of waypoints:

- Delivery of initial testing protocols for T&E replication, which should include all relevant details for setting-up and running the selected sensors, data collection methods, instructions to participants, etc.
- Delivery of collected data, final processing methods, and modeling algorithms to the T&E team for independent verification. This submission will follow guidelines provided by the T&E team for format and supporting documentation.
- Each phase, at least two manuscripts will be submitted for a peer-reviewed conference or journal.

### **1.B.5 Human Subjects Protections**

Proposals must include a description and justification of how offerors will attain their organization's IRB approval for their research plan within 5 months of contract award (Milestone 1, see Section 1.B.3) and within 3 months of the start of Phase 2 (Milestone 4, see Section 1.B.3). If offerors anticipate that the IRB review could take longer than this allotted time, they must clearly describe the reasons in their proposal and describe steps that can be taken to mitigate the schedule risk this creates. This information will be evaluated as part of the proposal review.

The description and justification for how offerors will attain IRB approval is separate from the draft IRB Human Subjects Research protocol submitted as Attachment 7 (see section 6.B.3). Attachment 7 will only be part of an initial compliance check for all necessary documentation upon receipt of the proposal and will not be part of the proposal evaluation.

The MOSAIC T&E team will require access to unprocessed data collected by each performer in order to perform an independent evaluation and verification of the performer's delivered software and algorithms. Accordingly, the MOSAIC T&E team will need to be included in each performer's IRB at the engagement level deemed appropriate for each institution's IRB. After being selected for funding, performers will be provided with descriptions of the MOSAIC T&E team and personnel, the T&E team's data architecture and security plan, and other necessary details, which performers should include in the protocols submitted to their respective IRB.

### **1.B.6 Data Protection Plan**

Proposals must include a plan for implementing, maintaining and assuring the safety, privacy, and protections for each subject and their data throughout the study. Offerors will be expected to propose the necessary safeguards and data architectures to protect and maintain subjects' privacy and data, protect those around the study participant, and implement other legal, ethical, and safety protections, as necessary. Offerors should consider how such safeguards and protections will be maintained throughout all phases of the program, to include during data collection, movement, analysis, and storage. This emphasis is of critical importance given the potential for unintentional re-identification via the rich datasets. This plan should be no more than 2 pages in the main proposal; however, additional details may be submitted as Attachment 8, if desired.

### **1.C. Program Timeline and Deliverables**

In addition to the milestones in Section 1.B, the Government will use the timeline below with programmatic gates to help the program maintain its 42-month program schedule.

Table 2 also includes a schedule for the key deliverables the performer shall provide. The offeror may add other deliverables in addition to the minimum set listed in the table.



**Table 2: Program Review and Deliverable Timeline**

<b>Month After Award</b>	<b>Event</b>	<b>Description</b>	<b>Deliverable(s)</b>
Month 2	Phase 1 Kickoff Workshop	Meeting in Washington DC area	<ul style="list-style-type: none"> <li>• Presentation materials and project plans</li> </ul>
Month 5	<b>Milestone 1:</b> Completed IRB	Institutional IRB approval	<ul style="list-style-type: none"> <li>• IRB approval letter and final approved proposal</li> </ul>
Month 5	<b>Waypoint:</b> Site Visit	Government team visits performer site to review status and discuss plans	<ul style="list-style-type: none"> <li>• Presentation materials and other relevant materials</li> </ul>
Month 6	<b>Waypoint:</b> Protocol Submission to T&E Team	Testing protocol submitted to T&E team	<ul style="list-style-type: none"> <li>• All technical details of proposed protocol provided to T&amp;E</li> </ul>
Month 10	<b>Milestone 2:</b> Site Visit Demo	Demo of protocol, sensor suite, data collection parameters, and results to date	<ul style="list-style-type: none"> <li>• Sensor &amp; protocol demo</li> <li>• Presentation materials</li> <li>• Interim report</li> </ul>
Month 10	<b>Milestone 2:</b> Internal Research Results	Delivery of internal research results to Government	<ul style="list-style-type: none"> <li>• Results on performer-run evaluations</li> <li>• All code and any necessary guides required to verify and re-run performer algorithms</li> </ul>
Month 11	End of Base Period	Interim Phase 1 report	<ul style="list-style-type: none"> <li>• Interim report summarizing activities and results to date</li> </ul>
Month 15	<b>Waypoint:</b> Site Visit	Government team visits performer site to review status and discuss plans	<ul style="list-style-type: none"> <li>• Presentation materials and other relevant materials</li> </ul>
Month 16	<b>Waypoint:</b> Data, Processing, and Modeling Delivery to T&E	All Phase 1 collected data, processing and modeling methods, algorithms, and software delivered to T&E team (pre- and post-processed)	<ul style="list-style-type: none"> <li>• All data, processing, modeling methods, algorithms, and software delivered to T&amp;E team according to established guidelines</li> </ul>
Month 17	<b>Milestone 3:</b> T&E Evaluation	Performers receive test sets from T&E and submit predicted scores	<ul style="list-style-type: none"> <li>• Predicted scores submitted to T&amp;E team</li> <li>• All code and any necessary guides required to verify and re-run performer algorithms</li> </ul>
Month 19	Principal Investigators' (PI) Workshop	Meeting in Boston MA area	<ul style="list-style-type: none"> <li>• Presentation materials and other relevant materials</li> </ul>
Month 20	<b>Waypoint:</b> Manuscripts	Submission of at least 2 manuscripts for peer review	<ul style="list-style-type: none"> <li>• Pre-publication review of manuscript prior to submission</li> <li>• Confirmation of submission</li> </ul>

Month 21	End of Phase 1 / End of Option Period 1	Final Phase 1 report	<ul style="list-style-type: none"> <li>• Final report summarizing Phase 1 activities and results</li> </ul>
Month 22	Phase 2 Kickoff (begin Option Period 2)	Phase 2 kickoff at each performer Site	<ul style="list-style-type: none"> <li>• Presentation materials and other project plans</li> </ul>
Month 24	<b>Milestone 4:</b> Completed IRB	Institutional IRB approval	<ul style="list-style-type: none"> <li>• IRB approval letter and final approved proposal</li> </ul>
Month 24	<b>Milestone 4:</b> Internal Research Results	Delivery of internal research results to Government	<ul style="list-style-type: none"> <li>• Results on performer-run evaluations</li> <li>• All code and any necessary guides required to verify and re-run performer algorithms</li> </ul>
Month 25	<b>Waypoint:</b> Protocol Submission to T&E Team	Testing protocol submitted to T&E team	<ul style="list-style-type: none"> <li>• All technical details of proposed protocol provided to T&amp;E</li> </ul>
Month 25	PI Workshop	Meeting in San Diego, CA area	<ul style="list-style-type: none"> <li>• Presentation materials and other relevant materials</li> </ul>
Month 31	<b>Milestone 5:</b> Site Visit Demo	Demo of protocol, sensor suite, data collection parameters, and results to date	<ul style="list-style-type: none"> <li>• Sensor &amp; protocol demo</li> <li>• Presentation materials</li> <li>• Interim report</li> </ul>
Month 31	<b>Milestone 5:</b> Internal Research Results	Delivery of internal research results to Government	<ul style="list-style-type: none"> <li>• Results on performer-run evaluations</li> <li>• All code and any necessary guides required to verify and re-run performer algorithms</li> </ul>
Month 32	End of Option Period 2	Interim Phase 2 report	<ul style="list-style-type: none"> <li>• Interim report summarizing activities and results to date</li> </ul>
Month 35	<b>Waypoint:</b> Site Visit	Government team visits performer site to review status and discuss plans	<ul style="list-style-type: none"> <li>• Presentation materials and other relevant materials</li> </ul>
Month 37	<b>Waypoint:</b> Data, Processing, and Modeling Delivery to T&E	All Phase 2 collected data, processing and modeling methods, algorithms, and software delivered to T&E team (pre- and post- processed)	<ul style="list-style-type: none"> <li>• All data, processing, modeling methods, algorithms, and software delivered to T&amp;E team according to established guidelines</li> </ul>
Month 38	<b>Milestone 6:</b> T&E Evaluation	Performers receive test sets from T&E and submit results	<ul style="list-style-type: none"> <li>• Results submitted to T&amp;E team</li> <li>• All code and any necessary guides required to verify and re-run performer algorithms</li> </ul>

Month 40	PI Working	Meeting in Washington, D.C. area	<ul style="list-style-type: none"> <li>• Presentation materials and other relevant materials</li> </ul>
Month 41	<b>Waypoint:</b> Manuscripts	Submission of at least 2 manuscripts for peer review	<ul style="list-style-type: none"> <li>• Pre-publication review of manuscript prior to submission</li> <li>• Confirmation of submission</li> </ul>
Month 42	End of Phase 2 / End of Option Period 3	Final Phase 2 report & program completion	<ul style="list-style-type: none"> <li>• Final report summarizing Phase 2 activities and results</li> </ul>

## **1.D. Meeting and Travel Requirements**

Performers are expected to assume responsibility for administration of their projects and to comply with contractual and Program requirements for reporting, attendance at Program workshops, and availability for site visits.

### **1.D.1 Workshops**

The MOSAIC program intends to hold a two-day program-level kick-off workshop by the second month of the program and then similar workshops annually thereafter. The dates and location of these are to be confirmed at a later date by the Government, but for planning purposes, offerors should use the approximate time and locations listed in Table 2. The two-day annual workshops will focus on technical aspects of the program and on facilitating open technical exchanges, interaction, and sharing among the various program participants. Program performers will be expected to present the technical status and progress of their projects to other performers and invited guests.

### **1.D.2. Site Visits**

Site visits by the Contracting Officer Technical Representative and the MOSAIC Program Manager and Government team will generally take place up to twice yearly during the life of the program. These visits will occur at the performer's facility. Reports on technical progress, details of successes and issues, contributions to the program goals, and technology demonstrations will be expected at such visits.

## **1.E. Place of Performance**

Performance will be conducted at the performer's site(s).

## **1.F. Period of Performance**

The MOSAIC Program is envisioned as a 42-month effort that is intended to begin May 2017. Phase 1 of the Program will last 21 months and Phase 2 will last 21 months. The Base Period is 11 months with three possible Option Periods of 10, 11, and 10 months, respectively.

## **SECTION 2: AWARD INFORMATION**

The BAA will result in awards for all phases of the program. Funding for the Option Period(s) will depend upon performance during the Base Period (and succeeding Option Periods), as well as program goals, the availability of funding, and IARPA priorities. Funding of Option Periods is at the sole discretion of the Government.

Multiple awards are anticipated. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation and to make awards without discussions with offerors. The Government also reserves the right to conduct discussions if the Source Selection Authority determines them to be necessary. Additionally, IARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for negotiations for award. In the event that IARPA desires to award only portions of a proposal, negotiations may be opened with that offeror.

Awards under this BAA will be made to offerors on the basis of the Evaluation Criteria listed in Section 5, program balance, and availability of funds. Proposals selected for negotiation may result in a procurement contract. However, the Government reserves the right to negotiate the type of award instrument it determines appropriate under the circumstances.

The Government will contact offerors whose proposals are selected for negotiations to obtain additional information required for award. The Government may establish a deadline for the close of fact-finding and negotiations that allows a reasonable time for the award of a contract. Offerors that are not responsive to Government deadlines established and communicated with the request may be removed from award consideration. Offerors may also be removed from award consideration should the parties fail to reach agreement within a reasonable time on contract terms, conditions, and cost/price.

## **SECTION 3: ELIGIBILITY INFORMATION**

### **3.A. Eligible Applicants**

All responsible sources capable of satisfying the Government's needs may submit a proposal. Historically Black Colleges and Universities (HBCUs), Small Businesses, Small Disadvantaged Businesses and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas for exclusive competition among these entities. Other Government Agencies, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), Government-Owned, Contractor-Operated (GOCO) facilities, Government Military Academies, and any other similar type of organization that has a special relationship with the Government, that gives them access to privileged and/or proprietary information or access to Government equipment or real property, are not eligible to submit proposals under this BAA or

participate as performer members under proposals submitted by eligible entities. An entity of which only a portion has been designated as a UARC may be eligible to submit a proposal or participate as a performer member subject to an organizational conflict of interest review described in section 3.A.1.

Foreign entities and/or individuals may participate to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, Export Control Laws and other governing statutes applicable under the circumstances. Proposers are expected to ensure that the efforts of foreign participants do not either directly or indirectly compromise the laws of the United States, nor its security interests. As such, offerors should carefully consider the roles and responsibilities of foreign participants as they pursue teaming arrangements.

### **3.A.1. Organizational Conflicts of Interest (OCI)**

“Organizational conflict of interest” means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person’s objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

If a prospective offeror, or any of its proposed subcontractor teammates, believes that a potential conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with IARPA and submit a notification by e-mail to the mailbox address for this BAA at [dni-iarpa-baa-16-10@iarpa.gov](mailto:dni-iarpa-baa-16-10@iarpa.gov). All notifications must be submitted through the prime offeror, regardless of whether the notification addresses a potential OCI for the offeror or one of its subcontractor teammates. A potential conflict of interest includes, but is not limited to, any instance where an offeror, or any of its proposed subcontractor teammates, is providing either scientific, engineering and technical assistance (SETA) or technical consultation to IARPA. In all cases, the offeror shall identify the contract under which the SETA or consultant support is being provided. Without a waiver from the IARPA Director, neither an offeror, nor its proposed subcontractor teammates, can simultaneously provide SETA support or technical consultation to IARPA and compete or perform as a Performer under this solicitation.

All facts relevant to the existence of the potential conflict of interest, real or perceived, should be disclosed in the notification. The request should also include a proposed plan to avoid, neutralize or mitigate such conflict. The offeror, or subcontractor teammate as appropriate, shall certify that all information provided is accurate and complete, and that all potential conflicts, real or perceived, have been disclosed. Offerors may submit this notification after release of the BAA, however, the Government may not respond prior to the proposal due date. Submission of a proposal is not dependent on a Government response. If, in the sole opinion of the Government, after full consideration of the circumstances, the conflict situation cannot be resolved or waived, any proposal submitted by the offeror that includes the conflicted entity will be excluded from consideration for award.

As part of their proposal, offerors who have identified any potential conflicts of interest shall include either an approved waiver signed by the IARPA Director, an IARPA Determination letter stating that no conflict of interest exists, or a copy of their notification. Otherwise, offerors

shall include in their proposal a written certification that neither they nor their subcontractor teammates have any potential conflicts of interest, real or perceived. A sample certification is provided in APPENDIX D.

If, at any time during the solicitation or award process, IARPA discovers that an offeror has a potential conflict of interest and no notification has been submitted by the offeror, IARPA reserves the right to immediately withdraw the proposal from further consideration for award.

Offerors are strongly encouraged to read “Intelligence Advanced Research Projects Activity’s (IARPA) Approach to Managing Organizational Conflicts of Interest (OCI)”, found on IARPA’s website at: <http://www.iarpa.gov/index.php/working-with-iarpa/iarpas-approach-to-oci>.

### **3.A.2 Multiple Submissions to the BAA**

Organizations may participate in more than one submission to the BAA, IARPA-BAA-16-10. However, if multiple submissions to the BAA which include a common performer member are selected, IARPA will, at contract negotiation, ensure that there is no duplicative funding, i.e. no one entity can be paid twice to perform the exact same task.

### **3.B. U.S. Academic Organizations**

According to Executive Order 12333, as amended, paragraph 2.7, “Elements of the Intelligence Community are authorized to enter into contracts or arrangements for the provision of goods or services with private companies or institutions in the United States and need not reveal the sponsorship of such contracts or arrangements for authorized intelligence purposes. Contracts or arrangements with academic institutions may be undertaken only with the consent of appropriate officials of the institution.”

It is **highly** recommended that offerors submit with their proposal a completed and signed Academic Institution Acknowledgement Letter for each U.S. academic institution that is a part of their team, whether the academic institution is serving in the role of prime, or a subcontractor or consultant. A template of the Academic Institution Acknowledgement Letter is enclosed in APPENDIX A of this BAA. It should be noted that an appropriate senior official from the institution, i.e., typically the President, Chancellor, Provost, or other appropriately designated official, must sign the completed form. Note that this paperwork **must** be received before IARPA can enter into any negotiations with any offeror when a U.S. academic organization is a part of its team.

### **3.C. Other Eligibility Criteria**

#### **3.C.1. Collaboration Efforts**

Collaborative efforts and teaming arrangements among potential performers are strongly encouraged. Specific content, communications, networking and performer formations are the sole responsibility of the participants.

## **SECTION 4: PROPOSAL AND SUBMISSION INFORMATION**

This notice constitutes the total BAA and contains all information required to submit a proposal. No additional forms, kits, or other materials are required.

### **4.A. Proposal Information**

Interested offerors are required to submit full proposals in order to receive consideration for award. All proposals submitted under the terms and conditions cited in this BAA will be reviewed. Proposals must be received by the time and date specified in section 4.C.1 in order to be assured of consideration during the initial round of selections. IARPA may evaluate proposals received after this date but prior to BAA closing. Selection remains contingent on the evaluation criteria, program balance and availability of funds. The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be included in a single proposal.

The Government intends to use employees of Booz Allen Hamilton, SCITOR Corporation, TASC, Vencore, Welkin Associates, BRTC Federal Solutions, Comtech Telecommunications Corporation, and Ops Consulting LLC to provide expert advice regarding portions of the proposals submitted to the Government and to provide logistical support in carrying out the evaluation process. These personnel will have signed and be subject to the terms and conditions of non-disclosure agreements. By submission of its proposal, an offeror agrees that its proposal information may be disclosed to employees of these organizations for the limited purpose stated above. Offerors who object to this arrangement must provide clear notice of their objection as part of their transmittal letter. If offerors do not send notice of objection to this arrangement in their transmittal letter, the Government will assume consent to the use of contractor support personnel in assisting the review of submittal(s) under this BAA.

Only Government personnel will make evaluation and award determinations under this BAA.

All administrative correspondence and questions regarding this solicitation should be directed by email to [dni-iarpa-baa-16-10@iarpa.gov](mailto:dni-iarpa-baa-16-10@iarpa.gov). Proposals must be submitted in accordance with the procedures provided in Section 4.C.2.

### **4.B. Proposal Format and Content**

All proposals must be in the format given below. Non-compliant proposals may be rejected without review. Proposals shall consist of two volumes: "Volume 1 - Technical and Management Proposal" and "Volume 2 - Cost Proposal." All pages shall be printed on 8-1/2 by 11 inch paper and IARPA desires that the font size not be smaller than 12 point. IARPA desires that the font size for figures, tables and charts not be smaller than 10 point. All contents must be clearly legible with the unaided eye. Excessive use of small font, for other than figures, tables, and charts or unnecessary use of figures, tables, and charts to present information may render the proposal non-compliant. Foldout pages shall not be used. The page limitation for full proposals includes all figures, tables, and charts. All pages should be numbered. Unnecessarily elaborate

brochures or presentations beyond what is sufficient to present a complete and effective proposal are not acceptable and will be discarded without review

The Government anticipates proposals submitted under this BAA will be UNCLASSIFIED.

Each proposal submitted in response to this BAA shall consist of the following:

**Volume 1 – Technical & Management Proposal (Limit to 35 Pages)**

Section 1 - Cover Sheet & Transmittal Letter

Section 2 – Summary of Proposal (Estimated not to exceed 4 pages)

Section 3 – Detailed Proposal

Section 4 – Attachments (Not included in page count, but number appropriately for elements included)

- 1 – Academic Institution Acknowledgment Letter Template, if required
- 2 – Restrictions on Intellectual Property Rights
- 3 – OCI Waiver, Determination, Notification or Certification
- 4 – Bibliography
- 5 – Relevant Papers (up to three)
- 6 – Consultant Letters of Commitment
- 7 – Human Use Documentation (see Section 6.B.3)
- 8 – Data Protection Plan (see Section 1.B.6)
- 9 – A Three Chart Summary of the Proposal (see APPENDIX H)

**Volume 2 – Cost Proposal**

Section 1 – Cover Sheet

Section 2 – Estimated Cost Breakdown

Section 3 – Supporting Information

**4.B.1. Volume 1, Technical and Management Proposal {Limit of 35 pages}**

Volume 1, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach on which the proposal is based. Copies of not more than three relevant papers can be included with the submission. The submission of other supporting materials along with the proposal is strongly discouraged and will not be considered for review. Except for the cover sheet, transmittal letter, table of contents (optional), and the attachments included in Volume 1, Section 4. Volume 1 shall not exceed **35** pages. Any pages exceeding this limit will be removed and not considered during the evaluation process. Full proposals should be accompanied by an official transmittal letter, using contractor format. All full proposals must be written in English.

**4.B.1.a. Section 1: Cover Sheet & Transmittal Letter**

A. Cover sheet: (*See APPENDIX B for Cover Sheet Template*)

B. Official Transmittal Letter.



**4.B.1.b. Section 2: Summary of Proposal (Estimated not to exceed 4 pages)**

Section 2 shall provide an overview of the proposed work as well as introduce associated technical and management issues. This section shall contain a technical description of technical approach to the research as well as a succinct portrayal of the uniqueness and benefits of the proposed work. It shall make the technical objectives clear and quantifiable and shall provide a project schedule with definite decision points and endpoints. Offerors must address:

- A. A technical overview of the proposed research and plan. This section is the centerpiece of the proposal and must succinctly describe the proposed approach and research. The overview must provide an intuitive understanding of the approach and design, technical rationale, and constructive plan for accomplishment of technical goals and deliverable production. The approach must be supported by basic, clear calculations. Additionally, proposals must clearly explain the innovative claims and technical approaches that will be employed to meet or exceed each program metric and provide ample justification as to why approaches are feasible. The use of non-standard terms and acronyms should be avoided. This section will be supplemented with a more detailed plan in Volume 1, Section 3 of the proposal.
- B. Summary of the products, transferable technology and deliverables associated with the proposed research results. Define measurable deliverables that show progress toward achieving the stated Program Milestones. All proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and/or prototype shall be detailed in Attachment 2. If there are no proprietary claims, this should be stated. Should no proprietary claims be made, Government rights will be unlimited.
- C. Schedule and milestones for the proposed research. Summarize, in table form and clearly legible for all activity, the schedule and milestones for the proposed research. Do not include proprietary information with the milestones.
- D. Related research. General discussion of other research in this area, comparing the significance and plausibility of the proposed innovations against competitive approaches to achieve Program goals.
- E. Project contributors. Include a clearly defined and clearly legible organizational chart of all anticipated project participants, organized under functional roles for the effort, and also indicating associated task number responsibilities with individuals.
- F. Technical Resource Summary:
  - Summarize total level of effort by labor category and technical discipline (i.e. research scientist/chemist/physicist/engineer/administrative, etc.) and affiliation (prime/subcontractor/consultant). Key Personnel shall be identified by name. Provide a brief description of the qualifications for each labor category (i.e. education, certifications, years of experience, etc.)

- Summarize level of effort by labor category and technical discipline for each major task, by affiliation
- Identify software and intellectual property required to perform, by affiliation (List each item separately)
- Identify materials and equipment (such as IT) required to perform, by affiliation (List each item separately)
- Identify any other resources required to perform (i.e. services, data sets, facilities, government furnished property, etc., by affiliation, list each item separately)
- Estimated travel, including purpose of travel and number of personnel per trip, by affiliation

The above information shall cross reference to the tasks set forth in the offerors statement of work, as described in BAA section 4.B.1.c, and shall be supported by the detailed cost and pricing information provided in the offeror's Volume 2 Cost Proposal.

#### ***4.B.1.c. Section 3: Detailed Proposal Information***

This section of the proposal shall provide the detailed, in-depth discussion of the proposed research as well as supporting information about the offeror's capabilities and resources. Specific attention must be given to addressing both the risks and payoffs of the proposed research and why the proposed research is desirable for IARPA to pursue. This part shall provide:

- A. Statement of Work (SOW) - In plain English, clearly define the technical tasks and sub-tasks to be performed, their durations and the dependencies among them. For each task and sub-task, provide:
- A general description of the objective;
  - A detailed description of the approach to be taken, developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the goals of the task;
  - Identification of the primary organization responsible for task execution (prime, sub-contractor, team member, etc.) by name;
  - The exit criteria for each task/activity, i.e., a product, event or milestone that defines its completion;
  - Definition of all deliverables (e.g., data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities.

**Note: Do not include any proprietary information in the SOW.**

At the end of this section, provide a Gantt chart, showing all the tasks and sub-tasks on the left with the performance period (in years/quarters) on the right. All milestones shall be clearly labeled on the chart. If necessary, use multiple pages to ensure legibility of all information.

- B. A detailed description of the objectives, scientific relevance, technical approach and expected significance of the work. The key elements of the proposed work should be

clearly identified and related to each other. Proposals should clearly detail the technical methods and/or approaches that will be used to meet or exceed each program milestone, and should provide ample justification as to why the proposed methods/approaches are feasible. Any anticipated risks should be described and possible mitigations proposed. General discussion of the problem without detailed description of approaches, plausibility of implementation, and critical metrics will result in an unacceptable rating.

- C. State-of-the-art. Comparison with other on-going research, highlighting the uniqueness of the proposed effort/approach and differences between the proposed effort and the current state-of-the-art. Identify advantages and disadvantages of the proposed work with respect to potential alternative approaches.
- D. Data sources. Identification and description of data sources to be utilized in pursuit of the project research goals.

Offerors proposing to use existing data sets must provide written verification that all data were obtained in accordance with U.S. laws and, where applicable, are in compliance with End User License Agreements, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Offerors shall identify any restrictions on the use or transfer of data sets being used, and, if there are any restrictions, the potential cost to the Government to obtain at least Government Purpose Rights in such data sets.<sup>12</sup>

Offerors proposing to obtain new data sets must ensure that their plan for obtaining the data complies with U.S. Laws and where applicable, with End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons.

Offerors should include the documentation required in 6.B.3 (Human Use). Documentation must be well written and logical; claims for exemptions from Federal regulations for human subject protection must be accompanied by a strong defense of the claims. The Human Use documentation and the written verification are not included in the total page count.

The Government reserves the right to reject a proposal if it does not appropriately address all data issues.

---

<sup>12</sup> “Government Purpose Rights” (or “GPR”) means the rights to use, modify, reproduce, release, perform, display, or disclose technical data and computer software within the Government without restriction; and to release or disclose technical data and computer software outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data or software for any United States Government purpose. United States Government purposes include any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software for commercial purposes or authorize others to do so.

E. Deliverables. Deliverables are identified in Section 1.C.

The Government requires at a minimum Government Purpose Rights for all deliverables; anything less will be considered a weakness in the proposal. However, if limited or restricted rights are asserted by the offeror in any deliverable or component of a deliverable, the proposal must identify the potential cost associated with the Government obtaining Government Purpose Rights in such deliverables. Proposals that do not include this information will be considered non-compliant and may not be reviewed by the Government.

In Attachment 2 of the proposal, offerors must describe the proposed approach to intellectual property for all deliverables, together with a supporting rationale of why this approach is in the Government's best interest. This shall include all proprietary claims to the results, prototypes, intellectual property or systems supporting and/or necessary for the use of the research, results and/or prototype, and a brief explanation of how the offerors may use these materials in their program. To the greatest extent feasible, offerors should not include background proprietary technical data and computer software as the basis of their proposed technical approach.

If offerors (including their proposed teammates) desire to use in their proposed approach, in whole or in part, technical data or computer software or both that is proprietary to offeror, any of its teammates, or any third party, in Attachment 2 they should: (1) clearly identify such data/software and its proposed particular use(s); (2) identify and explain any and all restrictions on the Government's ability to use, modify, reproduce, release, perform, display, or disclose technical data, computer software, and deliverables incorporating such technical data and computer software; (3) identify the potential cost to the Government to acquire GPR in all deliverables that use the proprietary technical data or computer software the offeror intends to use; (4) explain how the Government will be able to reach its program goals (including transition) within the proprietary model offered; and (5) provide possible nonproprietary alternatives in any area in which a Government entity would have insufficient rights to transfer, within the Government or to Government contractors in support of a Government purpose, deliverables incorporating proprietary technical data or computer software, or that might cause increased risk or cost to the Government under the proposed proprietary solutions.

Offerors also shall identify all commercial technical data and/or computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial technical data and/or computer software. If offerors do not identify any restrictions, the Government will assume that there are no restrictions on the Government's use of such deliverables. Offerors shall also identify all noncommercial technical data and/or computer software that it plans to generate, develop and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights. If the offeror does not submit such information, the Government will assume that it has unlimited rights to all such noncommercial technical data and/or computer software. Offerors shall provide a short summary for each item (commercial

and noncommercial) asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research.

Additionally, if offerors propose the use of any open source or freeware, any conditions, restrictions or other requirements imposed by that software must also be addressed in Attachment 2. Offerors should leverage the format in APPENDIX G for their response. (See also section 6.B.2. Intellectual Property). The technical content of Attachment 2 shall include only the information necessary to address the proposed approach to intellectual property; any other technical discussion in Attachment 2 will not be considered during the evaluation process. Attachment 2 is estimated not to exceed 4 pages.

For this solicitation, IARPA recognizes only the definitions of intellectual property rights in accordance with the terms as set forth in the Federal Acquisition Regulation (FAR) part 27, or as defined herein. If offerors propose intellectual property rights that are not defined in FAR part 27 or herein, offerors must clearly define such rights in Attachment 2 of their proposal. Offerors are reminded of the requirement for prime contractors to acquire sufficient rights from subcontractors to accomplish the program goals.

- F. Cost, schedule, milestones. Cost, schedule, and milestones for the proposed research, including estimates of cost by task, total cost, and company cost share, if any. The milestones must not include proprietary information.
- G. Offeror's previous accomplishments. Discuss previous accomplishments and work in this or closely related research areas and how these will contribute to and influence the current work.
- H. Facilities. Describe the facilities that will be used for the proposed effort, including computational and experimental resources.
- I. Detailed Management Plan. The Management Plan should identify both organizations and individuals within organizations that make up the performer, and delineate the expected duties, relevant capabilities, and task responsibilities of performer members and expected relationships among performer members. Expected levels of effort (percentage time or fraction of an FTE) for all key personnel and significant contributors should be clearly noted. A description of the technical, administrative and business structure of the performer and the internal communications plan should be included. Project/function/sub-contractor relationships (including formal teaming/performer agreements), Government research interfaces, and planning, scheduling, and control practices should be described. The performer leadership structure should be clearly defined. Provide a brief biography of the key personnel (including alternates, if desired) who will be involved in the research along with the amount of effort to be expended by each person during the year. Participation by key personnel and significant contributors is expected to exceed **25%** of their time. A compelling explanation is required for any variation from this figure.

If the performer intends to use consultants, they must also be included in the organizational chart. Indicate if the person will be an “individual” or “organizational” consultant (i.e., representing themselves or their organization), and organizational affiliation.

A table such as the following (**Table 3**) is recommended.

Table 3: Key Personnel

Participants	Org	Role	Unique, Relevant Capabilities	Role: Tasks	Time Commitment
Jane Wake	LMN Univ.	PI/Key Personnel	Cognitive Psychology & Computer Science	PI & Lead Integrator: 1-8	80%
Albert Wool	LMN Univ.	PM / Key Personnel	Institute Deputy Director/ Data Scientist	Program Manager: 1-8	75%
John Weck, Jr.	OPQ Univ.	Co-PI	Human Mobile Sensing (Sensors, data, and analysis)	Sensors, protocol design, modeling, & analysis: 2-8	50%
Dan Wind	RST Univ.	Key Personnel	I/O Psychologist	Protocol design & modeling: 2-4, 8	35%
Rachel Wade	XYZ Corp.	Key Personnel	Statistician	Statistical analysis: 2-5	35%
Chris West	XYZ Corp.	Significant Contributor	EE & Signal Processing	Data processing & modeling: 5-8	50%
Julie Will	JW Cons.	Consultant (Individual)	Human Subjects Research & Protections	IRB protocols, data protections, 2-4	200 hours
David Word	A Corp.	Consultant (A. Corp.)	Data Collection Architecture & Data Repository	Data collection, integrity, movement, and storage: 2,3,5	200 hours

It is anticipated that every proposal will involve Human Subjects experiments. As the amount of time required to complete the IRB review/approval process may vary, the management plan should identify any past experience with obtaining Institutional Review Board (IRB) approvals for human subject experimentation, and outline how IRB approval will be obtained for this proposal. An IRB submission or approval is not required prior to submission of a proposal, provided your timeline can meet the needs of the program. Some example items to cover in your IRB management plan include the following:

- What IRB will you be using and what is your relationship to that IRB (internal, external, commercial, etc.).
- Have you worked with this IRB before? How regularly?

- When do you anticipate submitting for and receiving IRB approval in your project timeline and how does that fit within your research plan?
- If time is tight, what is your contingency plan for a delay?

J. Resource Share. Include the type of support, if any, the offeror might request from the Government, such as facilities, equipment or materials, or any such resources the offeror is willing to provide at no additional cost to the Government to support the research effort. Cost sharing is not required from offerors and is not an evaluation criterion, but is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

K. The names of other federal, state or local agencies or other parties receiving the proposal and/or funding the proposed effort. If none, so state.

#### **4.B.1.d. Section 4: Attachments**

[NOTE: The attachments listed below must be included with the proposal, if applicable, but do not count against the Volume 1 page limit.]

Attachment 1: Signed Academic Institution Acknowledgement Letter(s) (if applicable). Template provided as APPENDIX A. See paragraph 3.B, US Academic Organizations.

Attachment 2: Restrictions on Intellectual Property Rights (if applicable). Template provided as APPENDIX G. This attachment is estimated not to exceed 4 pages.

Attachment 3: OCI Waiver/Determination/Notification or Certification. Template, provided as APPENDIX D. See paragraph 3.A.1., Organizational Conflicts of Interest (OCI).

Attachment 4: Bibliography. A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas on which the proposal is based.

Attachment 5: Relevant Papers. Copies of not more than three relevant papers may be included in the submission. The offerors should include a one page technical summary of each paper provided, suitable for individuals who are not experts in the field.

Attachment 6: Consultant Commitment Letters, if needed.

Attachment 7: Human Use Documentation.

Attachment 8: Data Protection Plan, additional pages (See Section 1.B.6)

Attachment 9: A Three Chart Summary of the Proposal. A PowerPoint that quickly and succinctly indicates the concept overview, key innovations, expected impact, and other unique aspects of the proposal. The format for the summary slides is included in APPENDIX H to this BAA and does not count against the page limit. Slide 1 should be a self-contained, intuitive

description of the technical approach and performance. These slides may be used during the evaluation process to present a summary of the proposal from the offeror's view.

#### **4.B.2. Volume 2: Cost Proposal {No Page Limit}**

The Offeror's proposal shall contain sufficient factual information to establish the offeror's understanding of the project, the perception of project risks, the ability to organize and perform the work and to support the realism and reasonableness of the proposed cost.

IARPA recognizes that undue emphasis on cost may motivate offerors to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. IARPA discourages such cost strategies. Cost reduction approaches that will be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

##### **4.B.2.a. Section 1: Cover Sheet.**

See APPENDIX C Cover Sheet Template

##### **4.B.2.b. Section 2: Estimated Cost Breakdown.**

Offerors shall submit numerical cost and pricing data using Microsoft Excel. The Excel document, in the format provided in APPENDIX E, shall include intact formulas and shall not be hard numbered. The base and option period cost data should roll up into a total cost summary. The Excel files may be write-protected but must not be password protected. The Cost/Price Volume must include the following:

- A. Completed Cost/Price Template - Offerors must submit a cost element breakdown for the base period, each option period and the total program summary in the format provided in APPENDIX E<sup>13</sup>.
- B. Subcontractor/Inter-organizational Transfers (IOTs) and Consultants summary in the format provided in APPENDIX F. (After selection, offerors may be required to submit full cost proposals, see 4.B.2.c. Subcontracts.)
- C. Total cost broken down by major task
- D. Major program tasks by fiscal year
- E. A summary of projected funding requirements by month
- F. A summary table listing all labor categories used in the proposal and their associated direct labor rates, along with escalation factors used for each base and option period of the acquisition.

---

<sup>13</sup> **NOTE:** Educational institutions and non-profit organizations as defined in FAR Part 31.3 and 31.7, respectively, at the prime and subcontractor level may deviate from the cost template in APPENDIX E and APPENDIX F when estimating the direct labor portion of the proposal to allow for OMB guided accounting methods (2 CFR Part 220) that are used by their institutions. The methodology must be clear and provide sufficient detail to substantiate proposed labor costs. For example, each labor category must be listed separately; identify key personnel, and provide hours/rates or salaries and percentage of time allocated to the project.



- G. A summary table listing all indirect rates used in the proposal for each for each base and option period of the acquisition.

**4.B.2.c.      *Section 3: Supporting Information***

In addition to the above, supporting cost and pricing information must be provided in sufficient detail to substantiate the offeror's cost estimates. Include a description of the basis of estimate (BOE) in a narrative for each cost element and provide supporting documentation, as applicable:

Direct Labor – Provide a complete cost breakout by labor category, hours and rates (APPENDIX E). Specify all key personnel by name and clearly state their labor category and proposed rate. Describe the basis of the proposed rates and provide a copy of the most recent Forward Pricing Rate Agreement (FPRA) with the Government. If offerors do not have a current FPRA with the Government, provide payroll records or contingency hire letters with salary data to support each proposed labor category, including those for key individuals, and the most recent Forward Pricing Rate Proposal Submission, if applicable. Offeror should also address whether any portion of their labor rates is attributable to uncompensated overtime.

Labor Escalation Factor – State the proposed escalation rate and the basis for that rate (e.g., based upon Global Insight indices, Cost Index or historical data). If the escalation rate is based upon historical data, provide data to demonstrate the labor escalation trend. Provide a sample calculation demonstrating application of the factor to direct labor.

Subcontracts (to include consultants and IOTs) – The offeror is responsible for compiling and providing all subcontractor proposals with the Cost Volume. Subcontractor cost element sheets shall be completed for the base period, each option period and the total summary in the format provided in APPENDIX F (Excel is not required for initial submittal, see paragraph below). Consultant letter(s) of commitment shall also be attached.

If a proposal is selected for negotiations, the prime must be prepared to present full subcontractor proposals (if applicable per subcontract type) for the base period, each option period and total cost summary including all direct and indirect costs immediately upon request by the Contracting Officer. Information shall be presented in Excel with intact formulas using the format provided in APPENDIX E and addressing the supporting cost information as outlined in 4.B.2.b. and 4.B.2.c. In addition to the full and complete subcontractor cost proposal, the offeror shall also provide its analysis of the subcontractor's proposal including justification for why the subcontractor was selected and its determination that the cost/price is fair and reasonable (Reference FAR Part 44 and FAR clause 52.244-2). If subcontractors have concerns about proprietary cost information, subcontractors can submit their detailed cost proposals directly to the Contracting Officer.

Materials and Equipment – Provide copies of quotes, historical data or any other information including offeror's analysis to support proposed costs.

Other Direct Costs (ODCs) and Travel – ODCs shall be listed separately and supported by quotes, historical data or any other information including the offeror's analysis. The proposed travel supporting detail shall include destination and purpose of the trip, number of travelers per trip and price per traveler in sufficient detail to verify the BOE. Proposed travel costs must comply with the limitations set forth in FAR Part 31.

Government Purpose Rights - If the offeror asserts limited or restricted rights in any deliverable or component of a deliverable, the cost proposal must separately identify the estimated cost associated with the Government obtaining Government Purpose Rights in such deliverables (reference sections 4.B.1.c.D. and 4.B.1.c.E).

Indirect Costs – The offeror shall show indirect cost calculations, identify the proposed indirect rate by contractor fiscal year and program period (base, option period) and provide information on indirect cost pools and allocation bases for each year and program period involved. If a Government agency recently audited the offeror's indirect rates, the offeror shall state by which agency the audit was conducted, when the rates were approved and the period for which they are effective. Include a copy of this rate agreement. Absent current Government rate recommendations, it is incumbent on the offeror to provide some other means of demonstrating indirect rate realism (e.g., 3 years of historical actual costs with applicable pools and bases). If proposed rates vary significantly from historical experience, the offeror must provide an explanation of the variance.

Cost sharing – Describe the source, nature and amount of cost-sharing, if any. Reference section 4.B.1.c.J.

Other Pricing Assumptions - Identify pricing assumptions which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/ Facilities/Information, access to Government Subject Matter Experts, etc.). Reference section 4.B.1.c.J.

Facilities Capital Cost of Money (FCCM) – If proposing FCCM, the offeror shall show FCCM cost calculations, identify the proposed FCCM factors by contractor fiscal year and program year and provide a copy of the FPRA, FPRS or FPRR, if available.

Profit/Fee - Identify the proposed profit/fee percentage and the proposed profit/fee base. Provide justification for your proposed fee/profit.

Systems: For the Systems listed below, provide a brief description, the cognizant federal agency and audit results. If the system has been determined inadequate, provide a short narrative of the steps your organization has taken to address the inadequacies and the current status. If a formal audit has been performed by a Government Agency, please provide a complete copy of the audit report or adequacy determination letter. If the system has never received a formal Government review/approval include a statement to that effect. Address whether your organization has contracts that are Cost Accounting

Standards (CAS) covered and if so, whether they are subject to full or modified CAS coverage.

- Accounting system
- Purchasing system

Certified “cost or pricing data” may be requested after selection for procurement contract awards of \$750,000 or greater, unless the Contracting Officer approves an exception from the requirement to submit cost or pricing data. (Reference FAR Part 15.403.)

#### **4.C. Submission Details**

##### **4.C.1. Due Dates**

See BAA General Information Section for proposal due dates and times.

##### **4.C.2. Proposal Delivery**

Proposals must be submitted electronically through the IARPA Distribution and Evaluation System (IDEAS). Offerors interested in providing a submission in response to this BAA must first register by electronic means in accordance with the instructions provided on the following web site: <https://iarpa-ideas.gov>. Offerors who plan to submit proposals for evaluation in the first round are strongly encouraged to register at least one week prior to the due date for the first round of proposals. Offerors who do not so register in advance do so at their own risk, and IARPA will not extend the due date for the first round of proposals to accommodate such offerors. Failure to register as stated will prevent the offeror’s submission of documents.

After registration has been approved, offeror’s should upload proposals, including Volume 1, Volume 2, scanned certifications and permitted additional information in ‘pdf’ format. Offerors are responsible for ensuring compliant and final submission of their proposals to meet the BAA submittal deadlines. Time management to upload and submit is wholly the responsibility of the offeror.

Upon completing the proposal submission the offeror will receive an automated confirmation email from IDEAS. Please forward that automated message to [dni-iarpa-BAA-16-10@iarpa.gov](mailto:dni-iarpa-BAA-16-10@iarpa.gov). IARPA strongly suggests that the offeror document the submission of their proposal package by printing the electronic receipt (time and date stamped) that appears on the final screen following compliant submission of a proposal to the IDEAS website.

Proposals submitted by any means other than IDEAS (e.g., hand-carried, postal service, commercial carrier and email) will not be considered unless the offeror attempted electronic submission but was unsuccessful. Should an offeror be unable to complete the electronic submission, the offeror must employ the following procedure. The offeror must send an e-mail to [dni-iarpa-BAA-16-10@iarpa.gov](mailto:dni-iarpa-BAA-16-10@iarpa.gov), prior to the first round proposal due date and time specified in the BAA, and indicate that an attempt was made to submit electronically but that the submission was unsuccessful. This e-mail must include contact information for the offeror. Following this email contact, additional guidance will be provided.

Proposals must be submitted by the time and date specified in the BAA in order to be assured of consideration during the first round of selections. IARPA may evaluate proposals received after this date until the closing date of the BAA. Selection remains contingent on proposal evaluation, program balance and availability of funds. Failure to comply with the submission procedures may result in the submission not being evaluated.

#### **4.D. Funding Restrictions**

Facility construction costs are not allowable under this activity. Funding may not be used to pay for commercialization of technology.

### **SECTION 5: PROPOSAL REVIEW INFORMATION**

#### **5.A. Technical and Programmatic Evaluation Criteria**

The criteria to be used to evaluate and select proposals for this Program BAA are described in the following paragraphs. Because there is no common statement of work, each proposal will be evaluated on its own merits and its relevance to the Program goals rather than against other proposals responding to this BAA. The proposals will be evaluated on the basis of the evaluation criteria listed in this section 5.A, program balance, and availability of funds. The evaluation criteria of this section 5.A, in descending order of importance, are: Overall Scientific and Technical Merit, Effectiveness of Proposed Work Plan, Contribution and Relevance to the IARPA Mission and Program Goal, Relevant Expertise and Experience, and Resource Realism. Specifics about the evaluation criteria are provided below, in descending order of importance.

Award(s) will be made to offerors on the basis of the evaluation criteria listed below in paragraphs 5.A.1 through 5.A.5, program balance, and availability of funds and subject to successful negotiations with the Government. Award recommendations will not be made to offeror(s) whose proposal(s) are determined not to be selectable. Offerors are cautioned that evaluation ratings may be lowered or proposals rejected if submission instructions are not followed.

##### **5.A.1. Overall Scientific and Technical Merit**

Overall scientific and technical merit of the proposal is substantiated, including unique and innovative methods, approaches, and/or concepts. The offeror clearly articulates an understanding of the problem to be solved. The technical approach is credible, and includes a clear assessment of primary risks and a means to address them. The proposed research advances the state-of-the-art.

##### **5.A.2. Effectiveness of Proposed Work Plan**

The feasibility and likelihood that the proposed approach will satisfy the Program's milestones and metrics are explicitly described and clearly substantiated along with risk mitigation strategies for achieving stated milestones and metrics. The proposal reflects a mature and quantitative

understanding of the Program milestones and metrics, and the statistical confidence with which they may be measured. Any offeror-proposed milestones and metrics are clear and well-defined, with a logical connection to enabling offeror decisions and/or Government decisions. The schedule to achieve the milestones is realistic and reasonable.

The roles and relationships of prime and sub-contractors is clearly delineated with all participants fully documented. Work plans must demonstrate the ability to provide full Government visibility into and interaction with key technical activities and personnel, and a single point of responsibility for contract performance. Work plans must also demonstrate that key personnel have sufficient time committed to the Program to accomplish their described Program roles.

The requirement for and the anticipated use or integration of Government resources, including but not limited to all equipment, facilities, information, etc., is fully described including dates when such Government Furnished Property (GFP), Government Furnished Equipment (GFE), Government Furnished Information (GFI) or other similar Government-provided resources will be required.

The offeror's proposed intellectual property and data rights are consistent with the Government's need to be able to effectively manage the program and evaluate the technical output and deliverables, communicate program information across Government organizations and support transition and further use and development of the program results to Intelligence Community users at an acceptable cost. The proposed approach to intellectual property rights is in the Government's best interest.

### **5.A.3. Contribution and Relevance to the IARPA Mission and Program Goal**

The proposed solution meets the letter and intent of the stated program goals and all elements within the proposal exhibit a comprehensive understanding of the problem. The offeror clearly addresses how the proposed effort will meet and progressively demonstrate the Program goals. The offeror describes how the proposed solution contributes to IARPA's mission to invest in high-risk/high-payoff research that can provide the U.S. with an overwhelming intelligence advantage over its future adversaries.

### **5.A.4. Relevant Experience and Expertise**

The offeror's capabilities, related experience, facilities, techniques, or unique combination of these, which are integral factors for achieving the proposal's objectives, will be evaluated, as well as qualifications, capabilities, and experience of the proposed principal investigator, performer leader, and key personnel critical in achieving the proposal objectives. Time commitments of key personnel must be sufficient for their proposed responsibilities in the effort.

### **5.A.5. Resource Realism**

The proposed resources are well justified and consistent with the unique technical approach and methods of performance described in the offeror's proposal. Proposed resources reflect a clear

understanding of the project, a perception of the risks and the ability to organize and perform the work. The labor hours and mix are consistent with the technical and management proposal and are realistic for the work proposed. Material, equipment, software, data collection and travel, especially foreign travel, are well justified, reasonable, and required for successful execution of the proposed work.

#### **5.B. Method of Evaluation and Selection Process**

IARPA's policy is to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the Government's technical, policy and programmatic goals. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

IARPA will only review proposals against the evaluation criteria described under section 5.A above, program balance, and availability of funds, and will not evaluate them against other proposals, since they are not submitted in accordance with a common work statement. For evaluation purposes, a proposal is the document described in Sections 4.A and 4.B. Other supporting or background materials submitted with the proposal will not be considered. Only Government personnel will make evaluation and award determinations under this BAA. Selections for award will be made on the basis of the evaluation criteria listed in paragraphs 5.A.1 through 5.A.5, program balance and the availability of funds. Selections for award will not be made to offeror(s) whose proposal(s) are determined to be not selectable.

#### **5.C. Negotiation and Contract Award**

Award of a contract is contingent on successful negotiations. After selection and before award, the contracting officer will determine cost/price realism and reasonableness, to the extent appropriate, and negotiate the terms of the contract.

The contracting officer will review anticipated costs, including those of associate, participating organizations, to ensure the offeror has fully analyzed the budget requirements, provided sufficient supporting cost/price information, and that cost data are traceable and reconcilable. Additional information and supporting data may be requested.

If the parties cannot reach mutually agreeable terms, a contract will not be awarded.

#### **5.D. Proposal Retention**

Proposals will not be returned upon completion of the source selection process. The original of each proposal received will be retained at IARPA and all other non-required copies will be destroyed. A certification of destruction may be requested, provided that the formal request is sent to IARPA via e-mail within 5 days after notification of proposal results.

### **SECTION 6: AWARD ADMINISTRATION INFORMATION**

## **6.A. Award Notices**

As soon as practicable after the evaluation of a proposal is complete, the offeror will be notified that: (1) its proposal has been selected for negotiations, or, (2) its proposal has not been selected for negotiations.

## **6.B. Administrative and National Policy Requirements**

### **6.B.1. Proprietary Data**

It is the policy of IARPA to treat all proposals as competitive information, and to disclose their contents only for the purpose of evaluation. All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the offeror's responsibility to clearly define to the Government what the offeror considers proprietary data.

### **6.B.2. Intellectual Property**

#### **6.B.2.a. *Noncommercial Items (Technical Data and Computer Software)***

Offerors responding to this BAA requesting a procurement contract shall identify in Volume 1, Attachment 2 of the proposal all noncommercial technical data and noncommercial computer software that it plans to generate, develop and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights and to assert specific restrictions on those deliverables, the basis for such restrictions, the potential cost to the Government to acquire GPR in all deliverables incorporating such noncommercial technical data and computer software, and the intended use of the technical data and noncommercial computer software in the conduct of the proposed research and development of applicable deliverables. If offerors intend to incorporate noncommercial, proprietary technical data or computer software into any deliverable, offerors should provide in Volume 1, Attachment 2 of their proposals all of the information regarding such proprietary technical data or computer software as described in sections 4.B.1.c.D and 4.B.1.c.E of this BAA.

In the event that offerors do not submit such information, the Government will assume that it automatically has unlimited rights to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and noncommercial computer software generated, developed and/or delivered under any award instrument, then offerors should identify the data and software in question and that the Government will receive GPR in such data and software. The Government will automatically assume that any such GPR restriction is limited to a period of five years, at which time the Government will acquire unlimited rights unless the parties agree otherwise. A sample format for complying with this request is shown in APPENDIX G. If no restrictions are intended, then the offeror should state "NONE."

Offerors are advised that the Government will use this information during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the offeror, as may be necessary, to evaluate the offeror's assertions.

For all technical data and computer software that the offeror intends to deliver with other than unlimited rights that are identical or substantially similar to technical data and computer software that the offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract, the offeror shall identify the contract number under which the data, software, or documentation were produced; the contract number under which, and the name and address of the organization to whom, the data and software were most recently delivered or will be delivered; and any limitations on the Government's rights to use or disclose the data and software, including, when applicable, identification of the earliest date the limitations expire.

The Government reserves the right to reject a proposal if it does not appropriately address all data issues.

**6.B.2.b.      *Commercial Items (Technical Data and Computer Software)***

Offerors shall identify in Section 4 (Attachment 2, template provided as APPENDIX G) of its proposal all commercial technical data and commercial computer software that may be incorporated in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial technical data and/or commercial computer software. In the event that offerors do not submit the list, the Government will assume that there are no restrictions on the Government's use of such commercial items. The Government may use the list during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the offeror, as may be necessary, to evaluate the offeror's assertions. A sample format for complying with this request is shown in APPENDIX G. If no restrictions are intended, then the offeror should state "NONE."

**6.B.2.c.      *All Offerors – Patents***

Include documentation using the format provided in APPENDIX G, proving ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under the proposal for the IARPA program. If a patent application has been filed for an invention that the proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, the offeror may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: (1) a representation that the offeror owns the invention, or (2) proof of possession of appropriate licensing rights in the invention.

If offerors intend to incorporate patented technology into any deliverable, i.e., if offerors intend for any deliverable to embody any invention covered by any patent or patent application the offerors list in APPENDIX G, offerors should also provide in Volume 1, Attachment 2 of their proposals all of the information described in section 4.B.1.c.E of this BAA.



#### **6.B.2.d. All Offerors – Intellectual Property Representations**

The offeror shall provide a good faith representation that they either own or possess appropriate licensing rights to all other intellectual property that will be utilized under their proposal for the program.

#### **6.B.3 Human Use**

All research involving human subjects, to include use of human biological specimens and human data, selected for funding must comply with the federal regulations for human subject protection, namely 45 CFR Part 46, *Protection of Human Subjects*.

Institutions awarded funding for research involving human subjects must provide documentation of a current Assurance of Compliance with Federal regulations for human subject protection, for example a Department of Health and Human Services, Office of Human Research Protection Federal Wide Assurance (<http://www.hhs.gov/ohrp>). All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition to a local IRB approval, IARPA will review and approve the HSR documentation before HSR may begin. However, IARPA does not require a secondary review by a Government IRB.

For all proposed research that will involve human subjects, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) with the final proposal submission to IARPA as outlined in the management plan. (Reference section 4.B.1.c.I.) The IRB conducting the review must be the IRB identified on the institution's Assurance. The informed consent document must comply with federal regulations (45 CFR Part 46).

The amount of time required to complete the IRB review/approval process may vary depending on the complexity of the research and/or the level of risk to study participants. Ample time should be allotted to complete the approval process. No IARPA funding can be used towards human subject research until ALL approvals are granted.

In limited instances, human subject research may be exempt from Federal regulations for human subject protection, for example, under Department of Health and Human Services, 45 CFR 46.101(b). Offerors claiming that their research falls within an exemption from Federal regulations for human subject protection must provide written documentation with their proposal that cites the specific applicable exemption and explains clearly how their proposed research fits within that exemption.

#### **6.B.4. Animal Use**

No research proposals involving animal subjects will be accepted under this BAA.

#### **6.B.5. Publication Approval**

It is anticipated that research funded under this Program will be unclassified research that will require a pre-publication review. However, performers should note that pre-publication approval of certain information may be required if it is determined that its release may result in the disclosure of sensitive intelligence information. A courtesy soft copy of any work submitted for publication must be provided to the IARPA Program Manager and the Contracting Officer Representative (COR) a minimum of 5 days prior to release in any forum.

#### **6.B.6. Export Control**

(1) The offeror shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 C.F.R. Parts 120 through 130, and the Export Administration Regulations (EAR), 15 C.F.R. Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the offeror shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.

(2) The offeror shall be responsible for obtaining export licenses, if required, before utilizing non-U.S. persons (as defined in the ITAR and EAR, as applicable) in the performance of this contract, including instances where the work is to be performed on-site at any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.

(3) The offeror shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(4) The offeror shall appropriately mark all contract deliverables controlled by ITAR and/or EAR.

(5) The offeror shall be responsible for ensuring that the provisions of this section apply to its sub-contractors.

(6) The offeror may be required to certify knowledge of and intended adherence to these requirements in the representations and certifications of the contract.

#### **6.B.7. Subcontracting**

It is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as sub-contractors to contractors performing work or rendering services as prime contractors or sub-contractors under Government contracts and to assure that prime contractors and sub-contractors carry out this policy. Each offeror that is selected for negotiation for award and is expected to be awarded a contract which exceeds the simplified acquisition threshold may be asked to submit a sub-contracting plan before award in accordance with FAR 19.702(a) (1). The plan format is outlined in FAR 19.704.

Offerors must declare teaming relationships in their proposals and must specify the type of teaming arrangement in place, including any exclusive teaming arrangements. IARPA neither

promotes nor discourages the establishment of exclusive teaming agreements within offeror teams. Individuals or organizations associated with multiple offerors must take care not to over-commit those resources being applied.

#### **6.B.8. Reporting**

Fiscal and management responsibility are important to the Program. Although the number and types of reports will be specified in the award document, all performers will, at a minimum, provide the Contracting Office, Contracting Officer Representative and the Program Manager with monthly technical reports and monthly financial reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed upon before award. Technical reports will describe technical highlights and accomplishments, priorities and plans, issues and concerns, evaluation results, and future plans. Financial reports will present an on-going financial profile of the project, including total project funding, funds invoiced, funds received, funds expended during the preceding month, and planned expenditures over the remaining period. Additional reports and briefing material may also be required, as appropriate, to document progress in accomplishing program metrics.

The performer will prepare and provide a research report of their work annually by month 12. The reports shall be delivered to the Contracting Officer, Contracting Officer Representative and the Program Manager. The reports will include:

- Problem definition
- Findings and approach
- System design
- Possible generalization(s)
- Information on performance limitations and potential mitigation
- Anticipated path ahead
- Final identification of all commercial, third-party, or proprietary hardware, software, or technical data integrated into any deliverable and all applicable use restrictions.

#### **6.B.9. System for Award Management (SAM)**

Selected offerors not already registered in the Systems for Award Management (SAM) may be required to register in SAM prior to any award under this BAA. Information on SAM registration is available at <http://www.sam.gov>.

#### **6.B.10. Representations and Certifications**

Selected offerors may be required to complete electronic representations and certifications at <http://www.sam.gov> and may also be required to complete additional representations and certifications prior to award.

#### **6.B.11. Lawful Use and Privacy Protection Measures**

All data gathered by the performer must be obtained in accordance with U.S. laws and in compliance with the End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Before using such data, the performer must provide proof that the data was acquired in accordance with U.S. laws and regulations.

#### **6.B.12. Public Access To Results**

IARPA is committed to making the results of this research available and maximally useful to the public, industry, government, and the scientific community, in accordance with the policy set forth in the White House Office of Science and Technology Policy’s memorandum “Increasing Access to the Results of Federally Funded Scientific Research,” dated February 22, 2013<sup>14</sup>, consistent with all other applicable law and policy; agency mission; resource constraints; and U.S. national, homeland, and economic security.

Awardees will be required to submit to IARPA the final version of peer-reviewed publication manuscripts related to research funded under awards made under this BAA. Awardees will be required to authorize IARPA to release these manuscripts to the public no later than twelve (12) months after the manuscript’s official publication date in a journal or other publication. In addition, IARPA intends to make unclassified data sets, samples, and other supporting materials developed or delivered under awards available to the public, unless IARPA stipulates otherwise or to the extent that such public release would compromise the ability to file for intellectual property protection on any invention arising from the data.

Insofar as possible, all data produced for MOSAIC, all reports to IARPA, and all MOSAIC-based publications must follow the suggestions of the Center for Open Science. Insofar as possible, all MOSAIC publications should qualify for Open Science’s<sup>15</sup> Open Data and Open Materials badges.

To the extent possible, all awardee reports to IARPA and all MOSAIC-based publications should be consistent with the statistical and methodological requirements for publication found in the 2014 Psychological Science editorial “Not Business as Usual”<sup>16</sup>. For example, wherever appropriate, effect sizes and confidence intervals (or the Bayesian equivalents) should be reported, and the data and methodology must be presented so that it is easily used for meta-analysis and independent re-analysis of the data. All offerors are encouraged to include statisticians and methodologists who are experts in these areas. All offerors must describe the plans to ensure that the above requirements are satisfied.

#### **6.B.13. Cloud Compatibility**

Software deliverables must be deployable to cloud platforms for testing and must be approvable for production use in the cloud. Technical approaches should generally avoid the following: requiring high-performance, special-purpose, or excessive quantities of virtual hardware not

---

<sup>14</sup> [https://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp\\_public\\_access\\_memo\\_2013.pdf](https://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf)

<sup>15</sup> Open Science (2013). Badges to acknowledge open practices.  
<https://openscienceframework.org/project/TVyXZ/>

<sup>16</sup> Psychological Science (2014) <http://pss.sagepub.com/content/25/1/3>

readily available in the cloud; requiring an obscure operating system, middleware, or plug-in code not readily available for use in the cloud or on the desktops used to access the cloud; leveraging inherently risky protocols, e.g., Telnet, or software packages, e.g., FOCI-relevant; or including custom code that is not inspectable by Information System Security professionals.

## **APPENDIX A**

### **Academic Institution Acknowledgement Letter Template**

#### **IARPA Broad Agency Announcement**

##### **MOSAIC**

**(IARPA-BAA-16-10)**

-- Please Place on Official Letterhead --

<Insert date>

To: Contracting Officer  
ODNI/IARPA  
Office of the Director of National Intelligence  
Washington, D.C. 20511

Subject: Academic Institution Acknowledgement Letter

Reference: Executive Order 12333, As Amended, Para 2.7

This letter is to acknowledge that the undersigned is the responsible official of <insert name of the academic institution>, authorized to approve the contractual relationship in support of the Office of the Director of National Intelligence's Intelligence Advanced Research Projects Activity and this academic institution.

The undersigned further acknowledges that he/she is aware of the Intelligence Advanced Research Projects Activity's proposed contractual relationship with <insert name of institution> through IARPA-BAA-16-10 and is hereby approved by the undersigned official, serving as the president, vice-president, chancellor, vice-chancellor, or provost of the institution.

---

<Name>

<Position>

---

Date

**APPENDIX B**

**SAMPLE COVER SHEET**

**For**

**VOLUME 1: Technical/Management Details**

**BROAD AGENCY ANNOUNCEMENT (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**



(1) BAA Number	<b>IARPA-BAA-16-10</b>
(2) Technical Area	
(3) Lead Organization Submitting Proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Performer Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Volume 1 no more than the specified page limit	Yes/No
(11) Restrictions on Intellectual property rights details provided in APPENDIX G format?	Yes/No
(12) OCI Waiver Determination, Notification or Certification [see Section 3.A.1] Included?	Yes/No
(12a) If No, is written certification included (APPENDIX D)?	Yes/No
(13) Are one or more U.S. Academic Institutions part of your performer?	Yes/No
(13a) If Yes, are you including an Academic Institution Acknowledgement Statement with your proposal for each U.S. Academic Organization that is part of your performer (APPENDIX A)?	Yes/No
(14) Total Funds Requested from IARPA and the Amount of Cost Share (if any)	\$
(15) Date Proposal as Submitted.	

**APPENDIX C**

**SAMPLE COVER SHEET**

**For**

**VOLUME 2: Cost Proposal**

**BROAD AGENCY ANNOUNCEMENT (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**

(1) BAA Number	<b>IARPA-BAA-16-10</b>
(2) Technical Area	
(3) Lead organization submitting proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Performer Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Contract type/award Instrument Requested: specify	
(11) Place(s) and Period(s) of Performance	
(12) Total Proposed Cost Separated by Basic Award and Option(s) (if any)	
(13) Name, Address, Telephone Number of the Offeror’s Defense Contract Management Agency (DCMA) Administration Office or Equivalent Cognizant Contract Administration Entity, if Known	
(14) Name, Address, Telephone Number of the Offeror’s Defense Contract Audit Agency (DCAA) Audit Office or Equivalent Cognizant Contract Audit Entity, if Known	
(15) Date Proposal was Prepared	
(16) DUNS Number	
(17) TIN Number	
(18) CAGE Code	
(19) Proposal Validity Period [minimum of 180 days]	
(20) Cost Summaries Provided (APPENDIX E and APPENDIX F)	
(21) Size of Business in accordance with NAICS Code 541712	

**APPENDIX D**

**Letter Template**

**For**

**Organizational Conflicts of Interest Certification Letter  
Template**

**IARPA Broad Agency Announcement (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**

(Month DD, YYYY)

Office of the Director of National Intelligence  
Intelligence Advanced Research Projects Activity (IARPA)  
MOSAIC  
ATTN:Contracting Officer .  
Washington, DC 20511

Subject: OCI Certification

Reference: <Insert Program Name>, IARPA-BAA-16-10, (Insert assigned proposal ID#, if received)

Dear Contracting Officer,

In accordance with IARPA Broad Agency Announcement IARPA-BAA-16-10, Section 3.A.1, *Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest (OCI)*, and on behalf of (offeror name) I certify that neither (offeror name) nor any of our subcontractor/teammates/performer has as a potential conflict of interest, real or perceived, as it pertains to the MOSAIC program.

If you have any questions, or need any additional information, please contact (Insert name of contact) at (Insert phone number) or (Insert e-mail address).

Sincerely,

(Insert organization name) (Must be signed by an official that has the authority to bind the organization)

(Insert signature)

(Insert name of signatory)

(Insert title of signatory)

**APPENDIX E**

**Sample Prime Contractor Cost Element Sheet**

**For**

**VOLUME 2: Cost Proposal**

**IARPA Broad Agency Announcement (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**

PRIME CONTRACTOR COST ELEMENT SHEET [SAMPLE]					
Complete a Cost Element Sheet for the Base Period and <u>each</u> Option Period					
COST ELEMENT	BASE	RATE	AMT		
<b>DIRECT LABOR</b> (List each labor category separately. Identify Key Personnel by name.)	# of Hours	\$	\$		
<b>TOTAL DIRECT LABOR</b>			\$		
<b>FRINGE BENEFITS</b>	\$	%	\$		
<b>TOTAL LABOR OVERHEAD</b>	\$	%	\$		
<b>SUBCONTRACTORS, IOTS, CONSULTANTS</b> (List separately. See below table.)			\$		
<b>MATERIALS &amp; EQUIPMENT</b> (List each material and equipment item separately.)	Quantity	\$ unit price	\$		
<b>SOFTWARE &amp; INTELLECTUAL Property</b> (List separately. See table below.)	\$	\$	\$		
<b>TOTAL MATERIALS &amp; EQUIPMENT</b>			\$		
<b>MATERIAL OVERHEAD</b>	\$	%	\$		
<b>TRAVEL</b> (List each trip separately.)	# of travelers	\$ price per traveler	\$		
<b>TOTAL TRAVEL</b>			\$		
<b>OTHER DIRECT COSTS</b> (List each item separately.)	Quantity	\$ unit price	\$		
<b>TOTAL ODCs</b>			\$		
<b>G&amp;A</b>	\$	%	\$		
<b>SUBTOTAL COSTS</b>			\$		
<b>COST OF MONEY</b>	\$	%	\$		
<b>TOTAL COST</b>			\$		
<b>PROFIT/FEE</b>	\$	%	\$		
<b>TOTAL PRICE/COST</b>			\$		
<b>GOVERNMENT SHARE, IF APPLICABLE</b>			\$		
<b>RECIPIENT SHARE, IF APPLICABLE</b>			\$		
<b>SUBCONTRACTORS/INTERORGANIZATIONAL TRANSFERS (IOT) &amp; CONSULTANTS PRICE SUMMARY</b>					
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>SUB-CONTRACTOR IOT &amp; CONSULTANT NAME</b>	<b>SOW TASKS PERFORMED *</b>	<b>TYPE OF AWARD</b>	<b>SUB-CONTRACTOR, IOT &amp; CONSULTANT QUOTED PRICE</b>	<b>COST PROPOSED BY PRIME FOR THE SUBCONTRACTOR, IOT &amp; CONSULTANT</b>	<b>DIFFERENCE (Column D - Column E) IF APPLICABLE</b>
<b>TOTALS</b>					

\*Identify Statement of Work, Milestone or Work Breakdown Structure paragraph, or provide a narrative explanation as an addendum to this Table that describes the effort to be performed.

Software and Intellectual Property Costs		
Item	Cost	Date of Expiration
(List)		

NOTE: Educational institutions and non-profit organizations as defined in FAR part 31.3 and 31.7, respectively, at the prime and subcontractor level may deviate from the cost template in APPENDIX E and APPENDIX F when estimating the direct labor portion of the proposal to allow for OMB guided accounting methods that are used by their institutions. The methodology must be clear and provide sufficient detail to substantiate proposed labor costs. For example, each labor category must be listed separately; identify key personnel, and provide hours/rates or salaries and percentage of time allocated to the project.



**APPENDIX F**

**Sample Subcontractor Cost Element Sheet**

**For**

**VOLUME 2: Cost Proposal**

**IARPA Broad Agency Announcement (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**

SUBCONTRACTOR COST ELEMENT SHEET [SAMPLE]			
Complete a Cost Element Sheet for each applicable period			
COST ELEMENT	BASE	BURDENED RATE	AMT
<b>DIRECT LABOR (List each labor category separately. Identify Key Personnel by name.)</b>	# hrs	\$	\$
<b>TOTAL DIRECT LABOR</b>			\$
<b>SUBCONTRACTORS, IOTS, CONSULTANTS</b>			\$
<b>MATERIALS &amp; EQUIPMENT (List each material and equipment item separately.)</b>	qty	\$ unit price	\$
<b>TOTAL MATERIALS &amp; EQUIPMENT</b>			\$
<b>TRAVEL (list each trip separately)</b>	# of travelers	\$ price per traveler	\$
<b>TOTAL TRAVEL</b>			\$
<b>OTHER DIRECT COSTS (List each item separately.)</b>	qty	\$ unit price	\$
<b>TOTAL OTHER DIRECT COSTS</b>			\$
<b>TOTAL PRICE/COST</b>			\$

Software and Intellectual Property Costs		
Item	Cost	Date of Expiration
(List)		

NOTE: Educational institutions and non-profit organizations as defined in FAR part 31.3 and 31.7, respectively, at the prime and subcontractor level may deviate from the cost template in APPENDIX E and APPENDIX F when estimating the direct labor portion of the proposal to allow for OMB guided accounting methods that are used by their institutions. The methodology must be clear and provide sufficient detail to substantiate proposed labor costs. For example, each labor category must be listed separately; identify key personnel, and provide hours/rates or salaries and percentage of time allocated to the project.

**APPENDIX G**

**Restrictions on Intellectual Property Rights**

**For**

**VOLUME 1: Technical and Management Proposal**

**IARPA Broad Agency Announcement (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**

### Noncommercial Items (Technical Data and Computer Software)

NONCOMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

Description of restrictions on Government's ability to use, modify, reproduce, release, perform, display, or disclose technical data, computer software, and deliverables incorporating technical data and computer software listed above:

Potential cost to the Government to acquire GPR in all deliverables incorporating the technical data and computer software listed above:

Intended use of the technical data and computer software listed above in the conduct of the proposed research:

### Commercial Items (Technical Data and Computer Software)

COMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

### Patents

PATENTS			
Patent number (or application number)	Patent name	Inventor name(s)	Patent owner(s)
(LIST)	(LIST)	(LIST)	(LIST)

## **APPENDIX H**

**Templates for Three Chart Summary of the Proposal**

**For**

**VOLUME 1: Technical and Management Proposal; Section 2**

**IARPA Broad Agency Announcement (BAA)**

**MOSAIC**

**(IARPA-BAA-16-10)**

### Chart 1: Overview

- Self-contained, intuitive description of the technical approach and performance
  - Avoid acronyms! Especially those that are contractor specific.

### Chart 2: Key Innovations

- Innovation 1
- Innovation 2
- Innovation 3

Graphics / Data

### Chart 3: Expected Impact

- Deliverable 1; Performance and Impact
- Deliverable 2; Performance and Impact
- Unique aspects of the proposal